

**REMARKS**

The above-identified application is United States application serial number 10/706,671 filed on November 11, 2003. Claims 1-31 are pending in the application. Claims 27 and 30 are rejected under 35 U.S.C. § 112. Claims 1, 2, 4-6, 8-10, 23, 24, 26, 28, 29, and 31 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Friebe *et al* in view of Schwaerzler *et al*. Claim 3 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Friebe *et al* as modified by Schwaerzler *et al* as applied to claim 1 above, and further in view of McKinney *et al*. Claim 7 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Friebe *et al* as modified by Schwaerzler *et al* as applied to claim 1 above, and further in view of Gillingham *et al*. Claims 11-15, 17-22 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Friebe *et al* in view of Schwaerzler *et al* and McKinney *et al*. Claim 16 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Friebe *et al* as modified by Schwaerzler *et al* and McKinney *et al* as applied to claim 1 above, and further in view of Gillingham *et al*. Applicant respectfully traverses these rejections.

*Amendments to the Specification*

Various amendments have been made to the specification as set forth beginning on page 2 herein to add and correct various reference numbers. No new matter has been added.

*Rejection of Claims Under 35 USC 112*

Claims 27 and 30 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. Specifically, it was not understood how the winglet rotates on about an axis in the plane of the outboard winglet and normal to the longitudinal axis of the aircraft. In response, Applicant has amended Claims 27 and 30 to recite a leading edge flap instead of an outboard winglet. Rotation of the leading edge flaps by the control system is supported by at least paragraphs [0058] and [0059] in the specification. Paragraph [0012] of the Summary has also been amended to reflect this change in the claims.

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*Rejection of Claims Under 35 USC 103(a)*

Claims 1, 2, 4-6, 8-10, 23, 24, 26, 28, 29, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Friebe *et al.*, U.S. Patent No. 4,598,886 (hereafter "Friebe") in view of Schwaerzler *et al.* U.S. Patent No. 4,161,300 (hereafter "Schwaerzler"). "To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations." MPEP § 2143. In the present case, neither Friebe or Schwaerzler, alone or in combination, teach or suggest all the claim limitations, nor is there any motivation or suggestion provided in the prior art to modify the teachings of Friebe or Schwaerzler to provide the claimed features.

Independent Claims 1 and 23 recite:

"a leading edge formed from leading edge segments on the inboard section, central section and outboard winglet, wherein the leading edge segments have mounted thereon leading-edge flaps; and  
a control system operable to reposition the leading edge flaps to improve aerodynamic performance of the supersonic aircraft."

Neither Friebe or Schwaerzler disclose or suggest leading edge flaps formed from the leading edge segments of the inboard, central and outboard section, or a control system to control the leading edge flaps. Schwaerzler was cited as teaching that a control system that controls the leading edge flaps, including strakes, is well known in the art, however, no figure, column, or line number of Schwaerzler was cited to support this assertion. Applicant is not able to locate any figure or section of Schwaerzler that discusses leading edge flaps on the inboard section, the central section or the outboard winglet, or a control system operable to reposition the leading edge flaps. Clarification of the sections of Schwaerzler that support the Examiner's position is requested in the event Claims 1 and 23 are still considered obvious in view of Friebe over Schwaerzler.

Additionally, there is no motivation or suggestion provided in either Friebe or Schwaerzler to include a movable strake on the parabolic wing of Friebe. Neither Friebe or Schwaerzler disclose or suggest curved leading edge flaps, which would be required for the

wing in Friebel. Further, one skilled in the art would not be motivated to incur the difficulties associated with manufacturing, mounting, and operating curved control surfaces on the curved leading edge profile of the wing in Friebel. Indeed, there is no reasonable expectation that such a combination of Friebel and Schwaerzler is even possible due to the curvature of the Friebel wing. Claims 1 and 23 are therefore allowable over Friebel and Schwaerzler, alone and in combination, for at least these reasons.

Claims 2-10 and 24-31 depend from Claims 1 and 23, respectively, and include features that further distinguish them from the cited references. Allowance of Claims 1-10 and 23-31 is respectfully requested.

Independent Claims 11 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Friebel as modified by Schwaerzler, and further in view of McKinney *et al.* U.S. Patent No. 4,427,168 (hereafter "McKinney"). The Examiner states that Friebel discloses a wing on a supersonic aircraft having an inboard section that is oriented dihedrally, a central section, and an outboard winglet that is oriented anhedrally relative to a lateral axis. The Examiner further states that Schwaerzler teaches that a control system that control the leading edge flaps (including strakes) are well known in the art; and that McKinney teaches that Kreuger flaps are well known in the art. Claims 11 and 19 are allowable over the Friebel and Schwaerzler references for at least the same reasons set forth above for Claim 1.

Claims 12-18 and 20-22 depend from Claims 11 and 19, respectively, and include features that further distinguish them from the cited references. Allowance of Claims 11-18 and 19-22 is respectfully requested.

#### *New Claims*

Claims 32-35 have been added to capture subject matter that was originally disclosed in the specification, at least in paragraph [0036]. Examination of Claims 32-35 is respectfully requested.

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CONCLUSION

Applicant believes Claims 1-31 are in form for allowance and a notice to that effect is solicited. Clarification of the sections of Schwaerzler that support the Examiner's position is requested in the event Claims 1 and 23 are still considered obvious in view of Friebe over Schwaerzler. Examination of newly added Claims 32-35 is requested. Various amendments have been made to the specification as set forth beginning on page 2 herein to add and correct various reference numbers. No new matter has been added.

In the event it would facilitate prosecution of this application, the Examiner is invited to telephone the undersigned at (949) 251-0250.

I hereby certify that this correspondence is being facsimile transmitted to the USPTO, Office of Initial Patent Examination (OIPE) at (703) 746-4050 on the date shown below:

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August 24, 2004  
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